



The roles of the reprogramming factors Oct4, Sox2 and Klf4 in resetting the somatic cell epigenome during induced pluripotent stem cell generation.

Journal: Genome Biol

Publication Year: 2012

Authors: Ryan Schmidt, Kathrin Plath

PubMed link: 23088445

Funding Grants: In vitro reprogramming of mouse and human somatic cells to an embryonic state, Discovery of

mechanisms that control epigenetic states in human reprogramming and pluripotent

cells, Understanding the status of the X chromosomes in human ESCs and preimplantation

embryos

Public Summary:

Somatic cell reprogramming to induced pluripotent stem (iPS) cells by defined factors is a form of engineered reverse development carried out in vitro. Here we review recent investigation that have begun to elucidate the molecular mechanisms whereby these factors function to reset the epigenome.

Scientific Abstract:

ABSTRACT: Somatic cell reprogramming to induced pluripotent stem (iPS) cells by defined factors is a form of engineered reverse development carried out in vitro. Recent investigation has begun to elucidate the molecular mechanisms whereby these factors function to reset the epigenome.

Source URL: https://www.cirm.ca.gov/about-cirm/publications/roles-reprogramming-factors-oct4-sox2-and-klf4-resetting-somatic-cell